



**HEALTH AND SAFETY PLAN**  
**BNSF LIBBY RAILYARD HYDRATED BIOTITE**  
**REMOVAL LIBBY, MONTANA**  
**EMR PROJECT 5539.002-1**

*Prepared for:*

**The Burlington Northern Santa Fe Railway Company**  
139 North Last Chance Gulch  
Helena, Montana 59601

*Prepared by:*

**ENVIRONMENTAL MANAGEMENT RESOURCES, INC.**  
2509 152<sup>ND</sup> Ave. NE, Suite E  
Redmond, Washington 98052

**OCTOBER 2002**



**ENVIRONMENTAL MANAGEMENT RESOURCES**

**HEALTH AND SAFETY PLAN**  
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**REMOVAL LIBBY, MONTANA**

**EMR PROJECT 5539.002-1**

*Prepared for:*

**The Burlington Northern Santa Fe Railway Company**

8204 East Park Meadows Drive  
Lone Tree, Colorado 80124

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**OCTOBER 2002**

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APPENDIX A. Daily Tailgate Safety Form

## 1.0 HEALTH AND SAFETY PLAN

Sampling is being performed in accordance with applicable Environmental Protection Agency (EPA), Occupational Safety and Health Administration (OSHA), corporate, and site health and safety requirements. A site-specific Accident Prevention Plan is included in Section 3. This Health and Safety Plan will be present on Site for the duration of the work activities.

A daily health and safety briefing will be conducted at the beginning of each workday and will be repeated as health and safety issues arise at the site. These health and safety briefings will discuss the hazards expected to be encountered each day during work activities including, at a minimum, the hazards of asbestos, heavy equipment, and heat or cold related health hazards.

No eating, drinking of beverages, use of tobacco, or applying of cosmetics will be allowed in the Exclusion Zone (EZ) or Contamination Reduction Zone. None of these activities may be done during the work day unless the worker has passed through the decontamination trailer within the Contamination Reduction Zone (CRZ). All workers entering the EZ will be required to wear protective equipment including but not limited to:

- Disposable Tyvek® coveralls with hood;
- Powered Air Purifying Respirators (PAPRs) with P100 HEPA cartridges until negative exposure air data warrants downgrading to full-face respirator with p100 HEPA cartridges;
- Orange hard hat with reflectorized tape;
- Orange reflectorized vest;
- Safety glasses (if no full face respirator is being worn);
- Safety toed boots;
- Disposable gloves duct-taped to disposable Tyvek® coveralls; and
- Disposable Boot Covers duct-taped to disposable Tyvek® coveralls.
- Hearing Protection

All workers entering the EZ will be required to have asbestos worker or supervisor certification in Montana. Each worker will be required to submit records of a current respirator fit test and physical exam. A daily sign in sheet

will be maintained at the entrance to the decontamination trailer, each worker shall sign in and out as they enter and exit the site.

## **2.0 DECONTAMINATION AND DUST SUPPRESSION REQUIREMENTS**

### **2.1 DECONTAMINATION PROCEDURES**

No vehicles or equipment extraneous to the job will be allowed to enter the EZ. All equipment will be decontaminated before being removed from the site. Personnel will be required to decontaminate themselves upon leaving the CRZ. The following paragraphs provide an overview of the decontamination and cleaning activities.

#### **2.1.1 Personnel Decontamination**

EMR's subcontractor will furnish and install a personnel decontamination trailer at the site for workers to use upon entering and exiting the EZ. Specifications for the decontamination facility are identified in Section 01563 of the Project Specification. The area east of the highway overpass on the north side of the tracks will be used for the decontamination facility. Administrative controls will be utilized to control different times for use by men and women. The decontamination trailer will consist of a three-stage unit including a clean room, a shower, and an equipment (dirty) room. Workers exiting the EZ will first take off an outer Tyvek® suit, wash their boots at a boot wash station, walk to the decontamination trailer and enter the dirty room, remove their protective clothing (except their respirators), shower, remove respirators, and then enter the clean room and re-robe before taking work breaks or leaving the Site for the day (Project Specification Section 01527). Respirators are to be taken off and cleaned in the shower before entering the clean room.

#### **2.1.2 Decontamination of Construction Equipment**

EMR's subcontractor will erect the decontamination pad consisting of polyethylene sheeting large enough to hold a vacuum truck. The edges will be raised such that water does not escape, and a means of transferring water to a series of filters with the capability of collecting particles of 5.0 microns or less will be in place. The filtered water will be containerized in 55-gallon drums until permission is secured to discharge water at a sanitary sewer location. See the Project Specification Section 01010 Part 16a for additional information.

All equipment will be decontaminated before leaving the site. The vacuum truck equipment will remain in the CRZ for the duration of the project unless mechanical failure requires its removal. Decontamination of equipment will consist of rinsing the equipment such that visible soil is removed from the exterior of the equipment. The interior of the equipment will be wiped with a wet cloth to remove any visible dust from the interior surfaces. At the end of the project, the

polyethylene sheeting and water filters will be disposed of as asbestos-containing material.

Trucks used for hauling the containers will not be required to de-contaminate as they will not enter the EZ or CRZ since the soil transfer containers will be located on the Contamination Control Line.

### **2.1.3 Air Sampling Equipment Decontamination**

Air sampling equipment (e.g., pumps, cassette holders, etc.) that is used within the EZ will be decontaminated prior to removal from the CRZ. Air sampling pumps, tubing, sampling stands, and rotometers will be decontaminated in the personal decontamination trailer. Equipment will be cleaned with wet disposable wipes or rags and dried with clean disposable wipes or rags. These rags will be disposed of as asbestos-containing material.

## **2.2 DUST SUPPRESSION PROCEDURES**

Any potential dust generated during vacuuming will be captured by the vacuum. Additionally, the soil will be wetted prior to and during vacuuming, and the soil will be wetted during waste transfer.

The vacuum truck holds a 1,000 gallon reservoir of water and if any additional water is necessary, a water truck will be available during work activities. Soils are to be kept adequately wet to suppress generation. This will be accomplished using a pressure-washer apparatus in front of the vacuum truck.

During waste transfer water will be added to the soil being augered into the soil staging containers.

### **3.0 ACCIDENT PREVENTION PLAN**

An Accident Prevention Plan has been prepared. Accidents will be prevented by reviewing hazards, conducting daily safety briefings, and being aware of on-site activities at all times. Phone numbers and directions of emergency services will be posted in the personal decontamination trailer. Tailgate safety meeting forms with attached egress routes and closest hospital information are attached as Appendix A.

#### **3.1 GENERAL INFORMATION**

**Project Name:** BNSF Libby Railyard Hydrated Biotite Removal FRAP

**Project No.:** 5539.002-1

**Project Manager:** Dave Welch      **Project Reviewer:** Don Clabaugh, PE

**Location:** Libby, Montana

**Prepared by:** Don Clabaugh      **Date prepared:** 4/18/02

**Approval by:** Chuck Hendrix      **Date:** 8/14/02

**Site Safety Officer Review:** Dave Welch/Scott Rhen      **Date:** 10/15/02

**Scope/Objective of Work:** Remove visible hydrated biotite that was mapped in October 2001 from the surface of the Site. Strip the soil with a HEPA-filtered vacuum truck

Soil will be transferred via auger and hose directly into a 30 yard steel dumpster double lined in plastic sheeting with a roof constructed of plastic sheeting. Soil passes through a hose from the truck directly into the dumpster.

Following removal of visible hydrated biotite, confirmation soil samples will be collected to confirm no detectable Libby amphibole is present. Discrete and composite samples will be collected. Discrete samples will be held pending analysis of composite samples. Soil samples will be analyzed by Libby amphibole (Tremolite/Actinolite Series) Method 9002, Issue 2. If composite samples contain a concentration of trace (<1% ) Libby amphibole or greater, than the discrete samples will be analyzed.

**Proposed Date(s) of Field Activities:** Between 10/21/02 and 11/3/02 with all work to be complete before the end of December 2002, weather permitting.

**Background Information:** X Complete         Preliminary (analytical data incomplete)



**Documentation/Summary:**

Overall Chemical/Waste hazard: ☐ Serious ☐ Moderate ☒ Low ☐ Unknown

Overall Physical hazard: ☐ Serious ☒ Moderate ☐ Low ☐ Unknown

### 3.2 SITE/WASTE CHARACTERIZATION

Waste Type(s): ☐ Liquid ☒ Solid ☐ Sludge ☐ Gas/Vapor

**Characteristics:**

☐ Flammable ☐ Volatile ☐ Corrosive ☐ Acutely toxic (LBP)

☒ Carcinogen (ACM) ☐ Reactive ☐ Explosive ☐ Radioactive

Other:

**Physical Hazards:**

☐ Overhead ☐ Confined Space ☐ Below Grade ☒ Trip/fall

☐ Puncture ☐ Burn ☒ Cut ☐ Splash ☒ Noise

Other:

**Site History/Description and Unusual Features:** Libby Railyard. Work will be conducted in areas including main line track and feeders. BNSF C-men will supervise work near rail lines.

**Locations of Chemicals/Wastes:**

Hydrated biotite has been observed and mapped at the Site. See Figures 1 and 2.

**Estimated Volume of Chemicals/Waste:** Unknown

**Sites currently in operation:** ☒ Yes ☐ No

### 3.3 HAZARD EVALUATION

Prior to each day of work, a "tailgate" safety meeting will be held to review the overall Health and Safety Plan, specific physical and chemical/waste hazards for the Site, and discuss routes of egress from the Site and routes to the nearest hospital in case of accident. Following the meeting, site personnel will sign a sheet with the current date and the date that they reviewed the Health and Safety Plan and discussed specific hazards and routes of egress for the Site. The sign-off sheet for each day will identify the specific work planned for that day. EMR personnel will have a functional cellular telephone available with them at all times in case of emergency. Equipment leaving the EZ, including cellular phones will be decontaminated. In the case of emergency, there will be two possible scenarios:

Scenario 1: Non-life threatening: Personnel will be escorted out of EZ and assisted in decontamination prior to delivery of injured worker to hospital.

Scenario 2: Life-threatening : EMR personnel will call 911, inform emergency personnel to access the site from the north such as to not cross the main rail line, receive emergency medical personnel at the site, supervise suiting up the emergency personnel in PPE at the decontamination trailer, and escorting the emergency personnel into the EZ. Emergency personnel will stabilize victim bring out of EZ, decontaminate the victim and themselves at decontamination trailer and deliver victim to hospital.

#### 3.3.1 Physical Hazard Evaluation/Control:

1. Hazard: Work around vacuum trucks involves mechanical and vacuum hazards.

Control: Daily tailgate meeting to identify hazards.

2. Hazard: Work around railroad lines involves extreme hazard of collision, which will be managed by BNSF flagmen.

Control: Work closely with BNSF roadmaster to identify rail schedule, avoid crossing BNSF mainline track, ensure all personnel working on-site have gone through BNSF Railway contractor safety training at [www.contractororientation.com](http://www.contractororientation.com).

3. Hazard: Work with polyethylene liner and water involves slip, trip and fall hazards.

Control: Daily tailgate meeting to identify hazard; contractor will keep polyethylene liner flat with minimal folds.

### 3.3.2 Chemical/Waste Hazard Evaluation/Control

(Source: NIOSH pocket guide to chemical hazards-June 1997)

#### Hazard:

COMPOUND	PEL/TWA	ROUTE OF EXPOSURE	ACUTE SYMPTOMS	ODOR THRESHOLD	ODOR DESCRIPTION
Asbestos	0.1 fiber/cc	Inhalation Ingestion Contact	None	None	None

#### Control:

Wet methods, vacuum technology with HEPA filtration, air monitoring to determine airborne fiber content.

### 3.4 SITE SAFETY WORK PLAN

#### Site Control:

☒ Perimeter identified      ☐ Site secured      ☒ Work area designated  
☒ Zones of contamination identified

Personnel Protection: Tyvek<sup>®</sup>, hardhat, steel-toed boots, safety glasses, and hearing protection.

Anticipated Levels of Protection: LEVEL C

Modifications: Safety Glasses, PAPRs with HEPA cartridge downgraded to full-face air purifying cartridge respirators if negative exposure air data warrants.

Action Levels for Evacuation of Work Zone: N/A (air monitoring detection will result in a change in the methods and/or procedures).

Air Monitoring Required: See Section 1.3

Decontamination Solutions and Procedures for Equipment, Sampling Gear, etc.:  
Detergent/water solution

Personnel Decontamination Protocol: 3-stage decontamination trailer with clean room, shower and equipment (dirty) room.

Decontamination Solution Monitoring Procedure, if applicable: NA

Special Site Equipment, Facilities, or Procedures (sanitary facilities, lighting, etc.):  
None

Site Entry Procedures and Special Considerations: Site entry will be dominated by access from the north to avoid crossing the main rail line that runs east-west on the south side of the rail yard. This consists of an access road that is present at the north side of the highway overpass.

Work Limitations (time of day, weather conditions, etc.) and heat/cold stress requirements: During daylight hours.

General Spill Control, if applicable: NA

Investigation-Derived Material Disposal (i.e. expendables, decontamination waste, cuttings): Expendables will be bagged for appropriate disposal as asbestos-containing materials.

Sample Handling Procedures, including protective wear: disposable gloves, safety glasses, respirators

### 3.5 EMERGENCY INFORMATION

Ambulance: ..... 911

Hospital Emergency Room: St. Johns Lutheran Hospital  
350 Louisiana Avenue  
Libby, MT 59923  
(406) 293-0100

Poison Control Center: ..... 1-800-542-6319

Police/Sheriff: ..... 911

FIRE Department: ..... 911

#### Agency contacts (EPA, state, local):

EPA Regional Office, Emergencies (406) 293-6194  
MDHE (406) 444-2544

#### EMR Contacts:

Don Clabaugh - Work: (425) 861-4561 ..... Home: (425) 880-4088  
T.J. Patnode: - Work: (425) 861-4561 ..... Home: (425) 868-2890  
David L. Welch - Work: (425) 861-4561 ..... Home: (425) 337-9124

Water Supply Source: N/A.....

Hospital Address: St. Johns Lutheran Hospital, 350 Louisiana Avenue

Directions: To be attached to each "tailgate" safety meeting sign-off sheet.

Emergency Egress Routes for Site Evacuation: North access road off Highway 37  
overpass. (See attached page) .....

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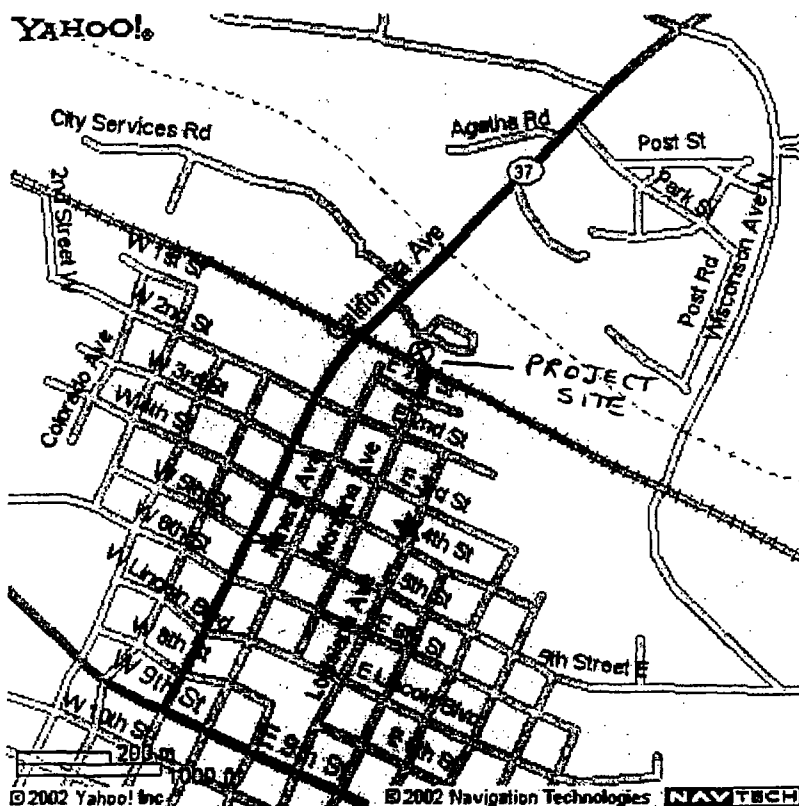
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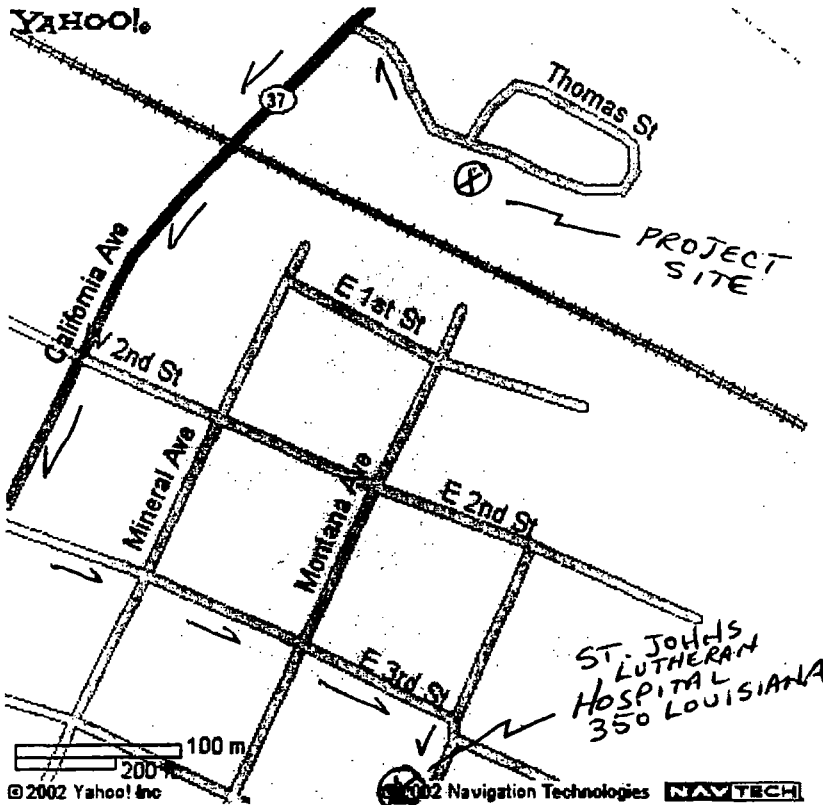
350 Louisiana Ave

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Libby, MT 59923-2130

**Country**

United States



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Arriving at: **2 350 Louisiana Avenue, Libby, MT 59923-2130** [Save Address](#)

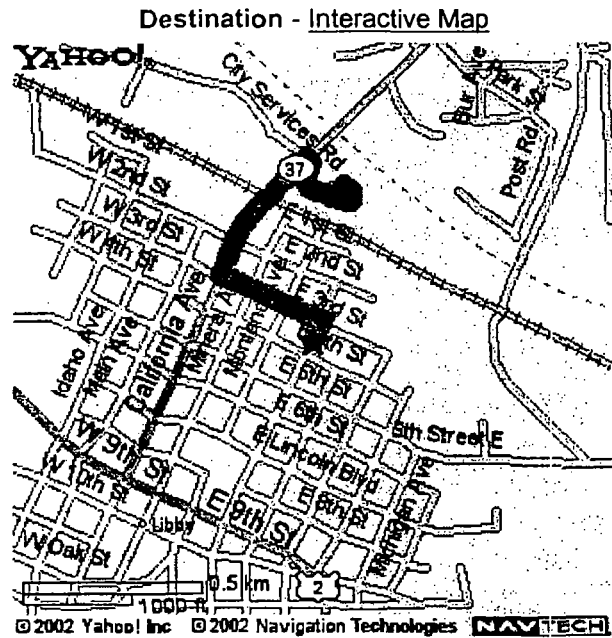
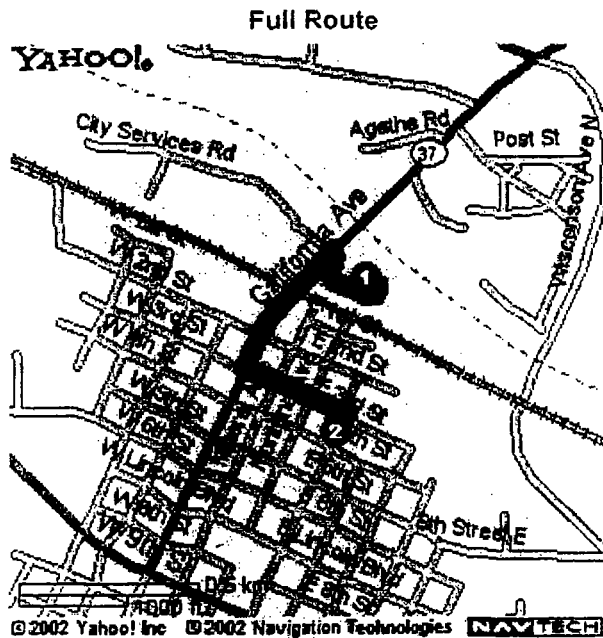
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## Directions

1. Start on **W THOMAS ST**
2. Turn Left on **CALIFORNIA AVE**
3. Turn Left on **W 3RD ST**
4. Continue on **E 3RD ST**
5. Turn Right on **LOUISIANA AVE**

## Miles

0.2 ↑  
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When using any driving directions or map, it's a good idea to do a reality check and make sure the road still exists, watch out for construction, and follow all traffic safety precautions. This is only to be used as an aid in planning.

**APPENDIX A**  
**DAILY TAILGATE SAFETY FORM**

EMR

DAILY TAILGATE SAFETY MEETING FORM

DATE: \_\_\_\_\_ TIME: \_\_\_\_\_ JOB NUMBER: \_\_\_\_\_  
PROJECT NAME: \_\_\_\_\_  
SPECIFIC LOCATION: \_\_\_\_\_  
TYPE OF WORK: \_\_\_\_\_  
CHEMICALS PRESENT: \_\_\_\_\_

SAFETY TOPICS DISCUSSED

Protective Clothing/Equipment: \_\_\_\_\_  
\_\_\_\_\_

Hazards of Chemicals Present: \_\_\_\_\_  
\_\_\_\_\_

Physical Hazards: \_\_\_\_\_  
\_\_\_\_\_

Emergency Procedures: \_\_\_\_\_  
\_\_\_\_\_

Hospital/Clinic: \_\_\_\_\_ Phone: \_\_\_\_\_ Paramedics: \_\_\_\_\_  
Hospital Address: \_\_\_\_\_

Special Hazards: \_\_\_\_\_  
\_\_\_\_\_

Other Topics: \_\_\_\_\_  
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ATTENDEES

Name (printed)

Signature

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